



Total Trihalomethanes (TTHMs) Exceedance Frequently Asked Questions



This document has been prepared to assist customers who have been notified that their drinking water exceeds the drinking water standard for Total Trihalomethanes (TTHMs). Below are some common questions about TTHMs and the drinking water standards.

Why are customers receiving public notices from their water system?

All public water systems are required by state and federal law to notify users of any exceedance of any water quality standard and any other noncompliance events affecting their water system. If this is an ongoing situation, customers have previously received periodic public notices for exceedance TTHM standards. The purpose of the public notice is to keep consumers informed about water quality. Public notices will be issued to customers for each quarter the public water system exceeds the TTHM standards.

What are TTHMs?

TTHMs are a group of chemicals known as disinfection byproducts. They form when chlorine used for disinfection reacts with naturally occurring organic material that is found in surface and ground waters. They are colorless, and will evaporate out of the water into the air.

Water systems can often experience temporary increases in TTHMs due to short-term increases in chlorine disinfection. Chlorine disinfection increases can occur when there is a water main break, when water systems are under repair, or when there is a potential microbial (example: bacteria) problem or threat.

All water systems that use chlorine to disinfect the water are required by federal and state law to sample for TTHMs on a regular basis in several locations in the distribution system.

Why is chlorine added?

Water systems add chlorine to its drinking water to disinfect it. Disinfection of water supplies is necessary to prevent illness and is a United States Environmental Protection Agency requirement for surface water sources when a well water source is vulnerable to fecal contamination. In Florida, all public water systems practice disinfection. The practice of disinfection has nearly eliminated most acute waterborne diseases such as dysentery, typhoid fever, and cholera in the United States, though they are still common in some other countries. These microbial diseases would otherwise be a major concern for children and other subgroups such as the elderly, immune compromised and pregnant women because of their greater vulnerabilities.

(Continued on page 2)

Trihalomethanes (TTHMs) Exceedance Frequently Asked Questions

Disinfection of the water first kills any microorganisms that may be present in the source water. Since surface waters are open to the environment, they are vulnerable to contamination by waterborne microorganisms (viruses, bacteria, and protozoa). Then, a small amount of disinfectant is required to be kept in the water as it travels through the pipes in the distribution system to prevent growth of microorganisms, or contamination from an outside source, such as during a water main break.

What are the health risks of TTHMs?

The information provided below is based on available health studies. Studies of populations that have been exposed to TTHMs suggest a possible connection between long-term TTHM exposure and certain types of cancer (bladder, colon, and rectal) and developmental (e.g. fetal growth) and reproductive effects (e.g. miscarriages, stillbirths). More research is being conducted to better understand the potential risks between TTHM exposures and these diseases. It is important that people be aware of these potential health effects from TTHM exposure.

Cancer risks generally accrue over lifetimes and very long periods of exposure. Cancer risks are normally expressed as lifetime risks as a result of averaging daily exposure levels (associated with the lifetime daily average of ingesting 2 liters of drinking water/day) over a lifetime of 70 years.

Based on these studies, and the potential for developmental and reproductive effects from TTHM exposure, women of childbearing age and pregnant women are the group that may be more susceptible to effects from TTHM exposure. To reduce this risk, this group may wish to act with caution and reduce their exposures.

You can also contact the US EPA Safe Drinking Water Hot Line at 1-800-426-4791.

Source:
Environmental Protection Agency
Florida Department of Health

